

PTO/SB/21 (09-04)

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TRANSMITTAL FORM (to be used for all correspondence after initial filing)	Application Number	10/705,615	
	Filing Date	11/10/2003	
	First Named Inventor	Xiaobo Wang	
	Art Unit	1744	
	Examiner Name	to be determined	
Total Number of Pages in This Submission	9	Attorney Docket Number	ACE-00101.P.1.2-US

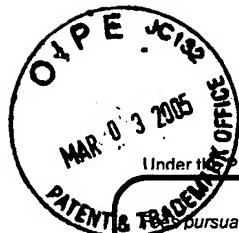
ENCLOSURES (Check all that apply)		
<input checked="" type="checkbox"/> Fee Transmittal Form	<input type="checkbox"/> Drawing(s)	<input type="checkbox"/> After Allowance Communication to TC
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<input type="checkbox"/> Affidavits/declaration(s)	<input type="checkbox"/> Power of Attorney, Revocation	<input type="checkbox"/> Status Letter
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<input type="checkbox"/> Express Abandonment Request	<input type="checkbox"/> Terminal Disclaimer	
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<input type="checkbox"/> Reply to Missing Parts/Incomplete Application	<input type="checkbox"/> Landscape Table on CD	
<input type="checkbox"/> Reply to Missing Parts under 37 CFR 1.52 or 1.53	Remarks 1. Listing of References on Form 1449; 2. 3 Volumes of cited references; and 3. Postcard	

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT			
Firm Name	David R Preston & Associates		
Signature			
Printed name	David R Preston		
Date	March 1, 2005	Reg. No.	38,710

CERTIFICATE OF TRANSMISSION/MAILING			
I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:			
Signature			
Typed or printed name	Raymond Wagenknecht	Date	3/1/05

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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Effective on 12/08/2004.

pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).

FEE TRANSMITTAL

For FY 2005

☒ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$)

0.00

Complete if Known

Application Number	10/705,615
Filing Date	11/10/2003
First Named Inventor	Xiaobo Wang
Examiner Name	to be determined
Art Unit	1744
Attorney Docket No.	ACE-00101.P.1.2-US

METHOD OF PAYMENT (check all that apply)☐ Check ☐ Credit Card ☐ Money Order ☐ None ☐ Other (please identify): _____☒ Deposit Account Deposit Account Number: 501321 Deposit Account Name: David R Preston

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

☐ Charge fee(s) indicated below ☐ Charge fee(s) indicated below, except for the filing fee☒ Charge any additional fee(s) or underpayments of fee(s) under 37 CFR 1.16 and 1.17 ☒ Credit any overpayments

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FEE CALCULATION**1. BASIC FILING, SEARCH, AND EXAMINATION FEES**

Application Type	FILING FEES		SEARCH FEES		EXAMINATION FEES		Fees Paid (\$)
	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	
Utility	300	150	500	250	200	100	
Design	200	100	100	50	130	65	
Plant	200	100	300	150	160	80	
Reissue	300	150	500	250	600	300	
Provisional	200	100	0	0	0	0	

2. EXCESS CLAIM FEES**Fee Description**

Each claim over 20 (including Reissues)

Fee (\$)**Small Entity Fee (\$)**

Each independent claim over 3 (including Reissues)

50

25

Multiple dependent claims

200

100

Multiple Dependent Claims**Fee (\$)****Fee Paid (\$)****Total Claims****Extra Claims****Fee (\$)****Fee Paid (\$)**

- 20 or HP =

x

=

HP = highest number of total claims paid for, if greater than 20.

Indep. Claims**Extra Claims****Fee (\$)****Fee Paid (\$)**

- 3 or HP =

x

=

HP = highest number of independent claims paid for, if greater than 3.

3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof	Fee (\$)	Fee Paid (\$)
- 100 =	/ 50 =	(round up to a whole number) x	=	

4. OTHER FEE(S)

Non-English Specification, \$130 fee (no small entity discount)

Fees Paid (\$)

Other (e.g., late filing surcharge):

SUBMITTED BY

Signature

Registration No.
(Attorney/Agent) 38,710

Telephone 858-724-0375

Name (Print/Type) David R Preston

Date Mar 1, 2005

This collection of information is required by 37 CFR 1.136. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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Patent

Docket Number: ACE-00101.P.1.2-US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:)	
)	
Wang et al.)	Examiner: To Be Determined
)	
Application No.: 10/705,615)	Art Unit: 1744
)	
Filed: November 11, 2003)	
)	
For: IMPEDANCE BASED)	
APPARATUSES AND METHODS)	
FOR ANALYZING CELLS AND)	
PARTICLES)	
)	

Commissioner for Patents
Alexandria, VA 22313

INFORMATION DISCLOSURE STATEMENT

Sir:


This Information Disclosure Statement is being filed before the mailing of a First Office Action on the merits under 37 C.F.R. § 1.97(a)(3). Accordingly, no fee under 37 C.F.R. § 1.17(p) is deemed necessary.

Applicants respectfully submit herewith a listing of references on the attached Form 1449 and three (3) volumes of cited references.

Please apply any charges not covered, or any credits, to Deposit Account number 501321 in the name of David R. Preston & Associates, having Customer Number 24232.

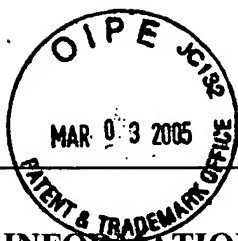
Respectfully submitted,

Date: March 1, 2005



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**INFORMATION DISCLOSURE****STATEMENT
BY APPLICANT**

(Use several sheets if necessary)

Docket Number:
ACE-00101.P.1.2-USApplication Number:
10/705,615Applicant:
Xiaobo WangFiling Date:
November 10, 2003Group Art Unit:
1744**U.S. PATENT DOCUMENTS**

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB- CLASS	FILING DATE IF APPROPRIATE
	P1	2002/0032531	03/2002	Mansky et al			
	P2	2002/0076690	06/2002	Miles et al			
	P3	2002/0086280	07/2002	Lynes et al			
	P4	2002/0110847	08/2002	Baumann et al			
	P5	2002/0150886	10/2002	Miles et al			
	P6	2,656,508	10/1953	Coulter			
	P7	3,259,842	07/1966	Coulter et al			
	P8	3,743,581	07/1973	Cady et al			
	P9	3,890,201	06/1975	Cady			
	P10	4,072,578	02/1978	Cady et al			
	P11	4,225,410	09/1980	Pace			
	P12	4,686,190	08/1987	Cramer et al			
	P13	4,920,047	04/1990	Giaever et al			
	P14	5,134,070	07/1992	Casnig			
	P15	5,187,096	02/1993	Giaever et al			
	P16	5,218,312	06/1993	Moro			
	P17	5,278,048	01/1994	Parce et al			
	P18	5,284,753	02/1994	Goodwin			

Examiner
SignatureDate
Considered

U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB- CLASS	FILING DATE IF APPROPRIATE
	P19	5,563,067	10/1996	Sugihara et al			
	P20	5,626,734	05/1997	Docoslis et al			
	P21	5,643,742	07/1997	Malin et al			
	P22	5,801,055	09/1998	Henderson			
	P23	5,810,725	10/1998	Sugihara et al			
	P24	5,851,489	12/1998	Wolf et al			
	P25	5,981,268	11/1999	Kovacs et al			
	P26	6,051,422	04/2000	Kovacs et al			
	P27	6,132,683	10/2000	Sugihara et al			
	P28	6,169,394	01/2001	Frazier et al			
	P29	6,232,062	05/2001	Kayyem et al			
	P30	6,235,520	05/2001	Malin et al			
	P31	6,280,586	08/2001	Wolf et al			
	P32	6,288,527	09/2001	Sugihara et al			
	P33	6,368,851	04/2002	Baumann et al			
	P34	6,376,233	04/2002	Wolf et al			
	P35	6,448,030	09/2002	Rust et al			
	P36	6,448,794	09/2002	Cheng et al			
	P37	6,472,144	10/2002	Malin et al			
	P38						

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FOREIGN PATENT DOCUMENTS								
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB- CLASS	Translation	
							YES	NO
	F1	96/01836	01/1996	PCT				
	F2	99/66329	12/1999	PCT				
	F3	00/71669	11/2000	PCT				
	F4	01/038873	05/2001	PCT				
	F5	02/42766	05/2002	PCT				
	F6							

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	D1	Aravanis et al. A genetically engineered cell-based biosensor for functional classification of agents. Biosensors & Bioelectronics 16:571-577 (2001)
	D2	Baumann et al. Microelectronic sensor system for microphysiological application on living cells. Sensors & Actuators B55:77-89 (1999)
	D3	Becker et al, Separation of human breast cancer cells from blood by differential dielectric affinity. Cell Biology. 92:960-964 (1995)
	D4	Berens et al, The role of extracellular matrix in human astrocytoma migration and proliferation studied in a microliter scale assay. Clin. Exp. Metastasis 12:405-415 (1994)
	D5	Bergveld, A critical evaluation of direct electrical protein detection methods, Biosensors& Bioelectronics. 6:55-72 (1991)
	D6	Burns et al, Neutrophil Transendothelial Migration Is Independent of Tight Junctions and Occurs Preferentially at Tricellular Corners. Journal of Immunology 2893-2903 (1997)

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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)		
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	D7	Duan et al, Separation-Free Sandwich Enzyme Immunoassays Using Microporous Gold Electrodes and Self-Assembled Monolayer/Immobilized Capture Antibodies, Anal. Chem. 66:1369-1377 (1994)
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	D17	Hidalgo et al, Characterization of the Human Colon Carcinoma Cell Line (Caco-2) as a Model System for Intestinal Epithelial Permeability. Gastroenterology 96:736-749 (1989)
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	D19	Keese et al, Real-time impedance assay to follow the invasive activities of metastatic cells in culture. Biotechniques 33:842-850 (2002)
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	D33	Patolsky et al, Detection of single-base DNA mutations by enzyme-amplified electronic transduction. Nature Biotechnology 19:253-257 (2001)
	D34	Pethig et al, Positive and negative dielectrophoretic collection of colloidal particles using interdigitated castellated microelectrodes. Appl. Phys. 24:881-888 (1992)
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	D42	Wang et al, A theoretical method of electrical field analysis for dielectrophoretic electrode arrays using Green's theorem. Appl. Phys. 1649-1660 (1996)
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Examiner Signature		Date Considered	
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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)		
EXAMINER INITIALS		CITATION
	D45	Wang et al, Dielectrophoretic Manipulation of Cells with Spiral Electrodes. Biophysical Journal 72:1887-1899 (1997)
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	D51	Xiao et al, An in-depth Analysis of Electric Cell-Substrate Impedance Sensing To Study the Attachment and Spreading of Mammalian Cells, Anal. Chem 74:1333-1339 (2002)
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	D54	http://www.bdbiosciences.com/discovery_labware/Products/inserts/BD_Falcon_HTS_fluoroblok_inserts/individual_fluoroblok_inserts/index.html
	D55	http://www.tecan.com/migration_introl.pdf
	D56	New Products page. Science 298:2409 (2002)
	D57	Abstract: Real-Time Impedance Assay to Follow the Invasive Activities of Metastatic Cells in Culture. Biotechniques 33: 842 (2002)
	D58	http://www.biophysics.com/pages/front.html
	D59	

Examiner Signature		Date Considered	
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